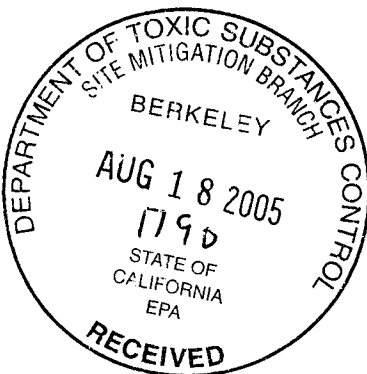




CH2MHILL

August 17, 2005
264204.PC.70/MIPC.C114D



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Mr. Henry Chui
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Subject: Cleanup Plan for an Abandoned Transformer Pad near Building 507, Within Investigation Area C1 in the Eastern Early Transfer Parcel of Mare Island

Dear Mr. Chui:

CH2M HILL prepared this letter in compliance with the requirements in the Consent Agreement (Lennar Mare Island [LMI] et al. 2001) signed April 16, 2001, between LMI, the City of Vallejo, and the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and according to the *Final Interim Removal Action Work Plan for Outdoor Polychlorinated Biphenyl Sites* (CH2M HILL 2005). This letter presents the cleanup plan for the polychlorinated biphenyl (PCB) site associated with Building 507.

PCB Site Identification

From visual site surveys and reviewing historical records, building closure reports, and databases of electrical equipment, the United States Department of the Navy (Navy) identified PCB sites where PCB-containing equipment was located, PCB spills were documented, or contamination was suspected because of building history or visible stains (Tetra Tech Environmental Management, Inc. [TtEMI] 1998). Navy personnel from Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) conducted interim PCB assessments and performed cleanup actions (i.e., washing, scabbling) in accordance with Technical Work Documents, where necessary. Following the SSPORTS interim PCB assessments and cleanup actions, TtEMI personnel collected confirmation samples to either confirm SSPORTS findings that no cleanup was necessary or to determine the effectiveness of the SSPORTS cleanup actions.

Building 507 is located along the northern side of Railroad Avenue between Connolly Street (formerly 3rd Street) and "A" Street within Investigation Area (IA) C1. Building 507 was built in 1940 and used for storage. Currently, Building 507 is leased to Latham Truss. Building 507 is located within Investigation Area C1, in an area designated for industrial use, according to the *Preliminary Land Use Plan* (SWA Group 2000).

There are three PCB sites associated with Building 507 listed in the Consent Agreement for the Eastern Early Transfer Parcel at Mare Island (LMI et al. 2001); they are identified as Building 507 Assessment Locations (AL) #01, AL#02, and AL#03. Figure 1 shows the locations of these PCB sites. Building 507 AL#01 is an abandoned transformer pad northwest of Building 507 and is the only site addressed in this letter. Building 507 AL#02 (floor of the building) and Building 507

AL#03 (PCB spill area north of the building) will be addressed in separate submittals. Documentation of the Navy PCB site assessment sampling, cleanup actions, and confirmation sampling is contained in the *Final Basewide Polychlorinated Biphenyl Confirmation Sampling Report* (TtEMI 1998) in the section for parcel 03-G.

The following sections provide a summary of previous sampling, cleanup actions, and the proposed cleanup plan for this site.

Summary of Previous Sampling and Cleanup Actions

According to the Navy files, five transformers are associated with Building 507 AL#01. Three of the transformers (T-0224, T-0270, and T-0304) were installed in 1942 on the transformer pad northwest of Building 507. The oil within these three transformers contained PCBs at 17.2, 14.4, and 54.3 parts per million, respectively, and all three leaked (Navy 1996). Transformers T-0270 and T-0304 both contained 45 gallons of oil and T-0224 contained 59 gallons of oil (Navy 1996). Two non-PCB transformers, T-1809 and T-1821, were installed in 1987 on a new concrete pad adjacent to the site of the former PCB-containing transformers. These transformers (T-1809 and T-1821) are still located at the site and are in use. The three former transformers (T-0224, T-0270, and T-0304) were removed in 1988 (Navy 1996).

As part of the interim assessment, SSPTS personnel collected two concrete chip samples (6218-0118 and 6218-0119) on August 9, 1996, from the location of the former transformers at Building 507 AL#01 (SSPTS 1996). PCBs were detected in one of the samples at a concentration of 2.6 milligrams per kilogram (mg/kg). PCBs were not detected in the other sample above the laboratory reporting limit of 5 mg/kg. Sample locations and concentrations are shown on Figure 2.

TtEMI personnel collected two concrete samples (PC0761 and PC0763) and two soil confirmation samples (PC0762 and PC0764) on July 8, 1997. The concrete samples were collected from stained areas and contained PCBs at concentrations of 0.3J and 2J mg/kg (TtEMI 1998). The soil samples were collected from areas of exposed soil adjacent to the pad and contained PCBs at concentrations of 0.4 and 0.8J mg/kg (TtEMI 1998). Sample locations and concentrations are shown on Figure 2.

CH2M HILL personnel performed additional sampling with the collection of three concrete samples (B507AL01-CH0501-CO, B507AL01-CH0502-CO, and B507AL01-CH0503-CO) and one sediment sample (B507AL01-GB0504-SO) in May 2004, shown in Figure 2. The concrete samples were collected from the location of the former transformers and the sediment sample was collected from the bottom of the sump located next to the pad. PCBs were detected in one of the concrete samples (B507AL01-CH0502-CO) at a concentration of 0.369 mg/kg. PCBs were not detected in the other two samples above the laboratory reporting limits of 0.0327 or 0.0321 mg/kg. The sediment sample contained PCBs at a concentration of 1.29 mg/kg. Table 1 contains the sampling summary. Sample locations and concentrations are shown on Figure 2.

The newer transformers, marked "non-PCB" by the manufacturer(s), were installed adjacent to the site of the former PCB-contaminated transformers and are still in use. Therefore, the site of the new transformers was not sampled.

Cleanup Plan

Figure 3 shows the proposed cleanup action and verification sample locations for Building 507 AL#01. Concrete will be removed in an approximately 6-foot by 8-foot area during this cleanup action to a depth of 6 inches below the surface of the concrete. In addition to removing the concrete pad and soil below the pad, soil adjacent to the former transform pad and sediment within the sump will be removed from the site. Soil will be removed in an area approximately 4 feet by 7 feet, to a depth of 6 inches below ground surface, and sediment from within the sump will be removed from the site.

This cleanup action at Building 507 AL#01 is scheduled for September 2005. Nine verification samples will be collected in the removal area on a 1-meter by 1-meter grid, as shown in Figure 3. The cleanup goal is to achieve a remaining PCB concentration of less than or equal to 0.74 mg/kg, as determined by the verification sampling. The cleanup action and verification sampling will continue until the sample results indicate that this cleanup goal has been achieved.

The *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005) illustrates the process for PCB site closure under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Toxic Substances Control Act (TSCA). Under CERCLA, No Further Action (NFA) is appropriate at a PCB site if there is no potential source, and no PCB contamination present at the site (CH2M HILL 2003). Even if there is a potential source or PCB contamination present in machinery or building materials, under CERCLA, NFA is appropriate at a site if there is no release of PCBs to soil or groundwater, nor any visible pathway for migration of PCBs to soil or groundwater (CH2M HILL 2005).

PCB Site Closure Process

The *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005) illustrates the process for PCB site closure under CERCLA and TSCA. Under CERCLA, NFA is appropriate at a PCB site if there is no potential source, and no PCB contamination present at the site (CH2M HILL 2005). Even if there is a potential source or PCB contamination present in machinery or building materials, NFA under CERCLA is appropriate at a site if there is no release of PCBs to soil or groundwater, nor any visible pathway for migration of PCBs to soil and/or groundwater (CH2M HILL 2005). Such sites will be evaluated under TSCA for site closure in accordance with the United States Environmental Protection Agency Consent Agreement/Final Order (USEPA et al. 2001). If there is a known release to soil or groundwater, then NFA is also appropriate if the detected PCB concentrations in soil and groundwater do not exceed the applicable preliminary remediation goal, or results of a site-specific risk evaluation demonstrate that potential risks associated with exposure to residual PCBs are within the risk-management range generally used to determine if cleanup is necessary. In compliance with this process, Figure 4 provides a flowchart illustrating the PCB site closure process, with the path for Building 507 AL#01 highlighted.

Conclusions

At Building 507 AL#01, the maximum detected PCB concentration in concrete is 2.6 mg/kg, in sediment is 1.29 mg/kg, and in soil is 0.8J mg/kg. PCB concentrations greater than 0.74 mg/kg will be removed in accordance with the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2005). The cleanup goal is to achieve a remaining PCB concentration of less than or equal to 0.74 mg/kg, as demonstrated by verification samples.

If you have any questions or concerns regarding this cleanup plan for Building 507 AL#01, please contact Tom Corontzos at 530/229-3227. Please submit your approval of this cleanup plan to me within 30 calendar days of receiving this letter at the above address or via e-mail at jmorris1@CH2M.com.

References

- CH2M HILL. 2003. *Final Polychlorinated Biphenyl Work Plan*. May 7.
- _____. 2005. *Final Interim Removal Action Work Plan for Outdoor Polychlorinated Biphenyl Sites*. April 27.
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- United States Environmental Protection Agency, United States Department of the Navy, the City of Vallejo, and Lennar Mare Island. 2001. *Complaint/Consent Agreement and Final Order between Lennar Mare Island, the City of Vallejo, the U.S. Department of the Navy, and the U.S. Environmental Protection Agency Region IX*. EPA Docket No. TSCA-9-2002-0002. December 20.

Sincerely,
CH2M HILL



Jeffery C. Morris, PE

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Enclosures: Figures 1 through 4; Table 1

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Page 5
August 17, 2005

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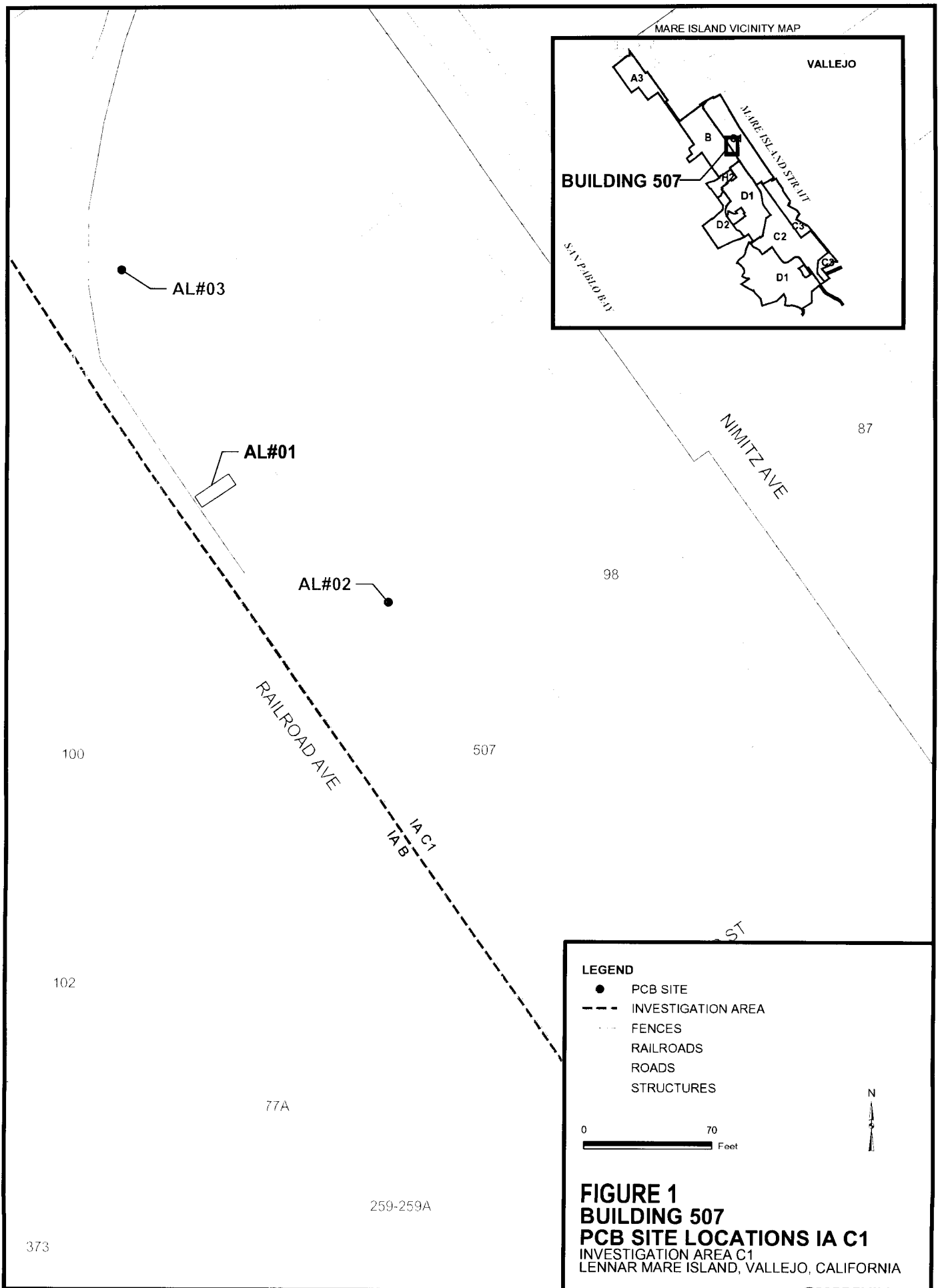
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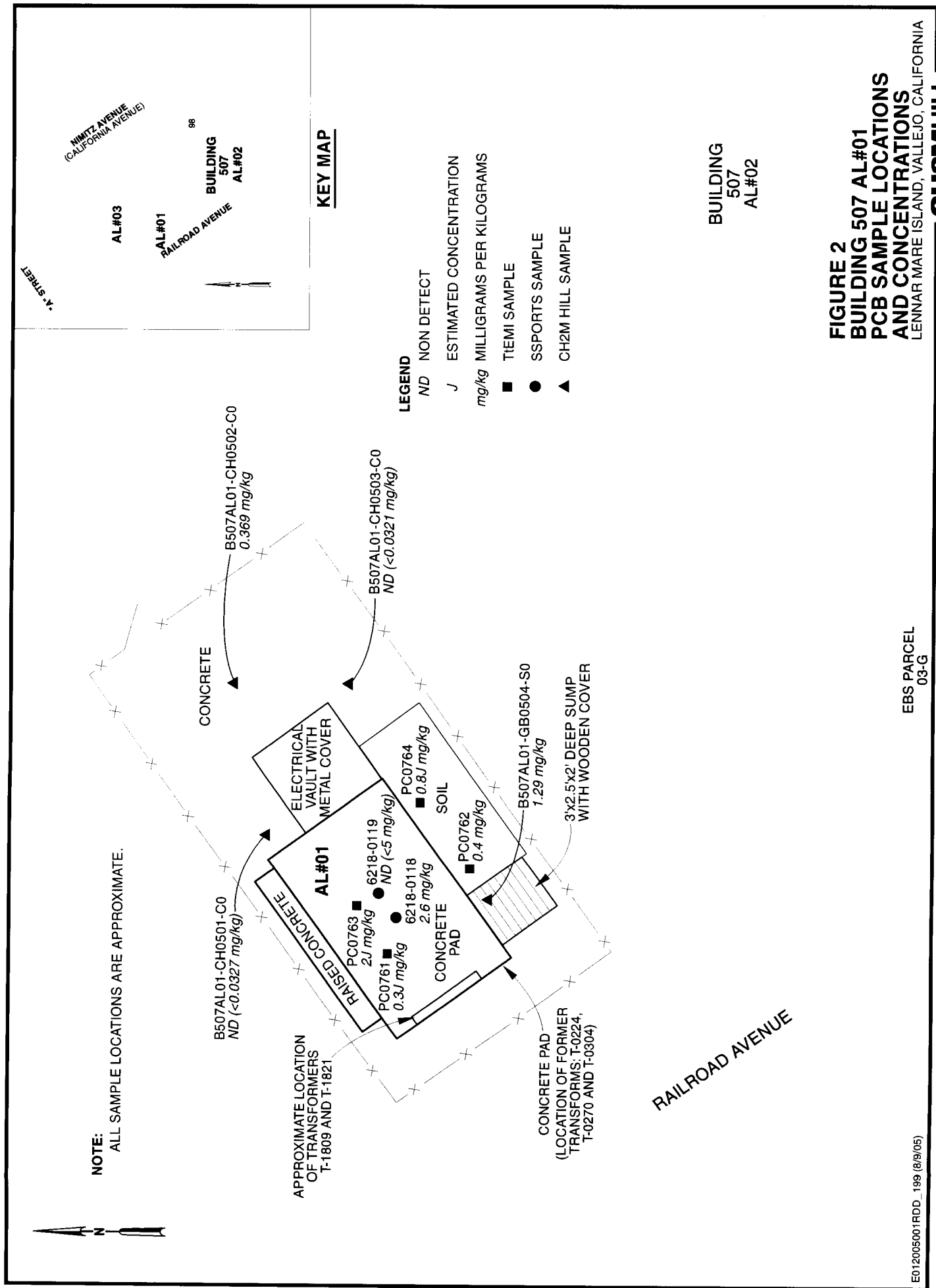
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Page 7
August 17, 2005

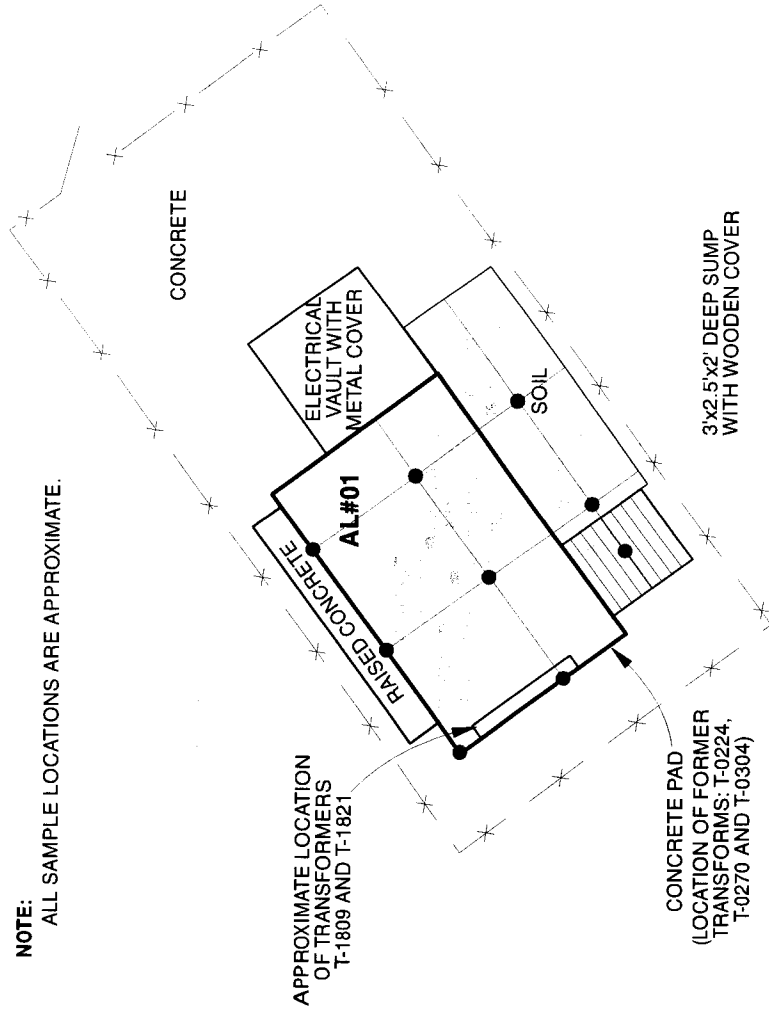
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NOTE:
ALL SAMPLE LOCATIONS ARE APPROXIMATE.

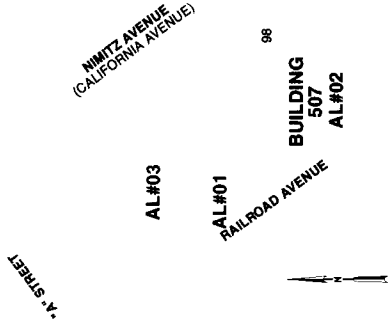


0 2.5 5 FEET
SCALE IS APPROXIMATE

RAILROAD AVENUE

EBS PARCEL
03-G

FIGURE 3
BUILDING 507 AL#01
PROPOSED REMOVAL AREA
AND VERIFICATION SAMPLE LOCATIONS
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA



KEY MAP

LEGEND

- ND NON DETECT
- J ESTIMATED CONCENTRATION
- mg/kg MILLIGRAMS PER KILOGRAMS
- TtEMl SAMPLE
- SSPORTS SAMPLE
- CH2M HILL SAMPLE
- REMOVAL AREA
- PROPOSED VERIFICATION SAMPLE LOCATION
- ✕ 1 METER BY 1 METER GRID

BUILDING
507
AL#02

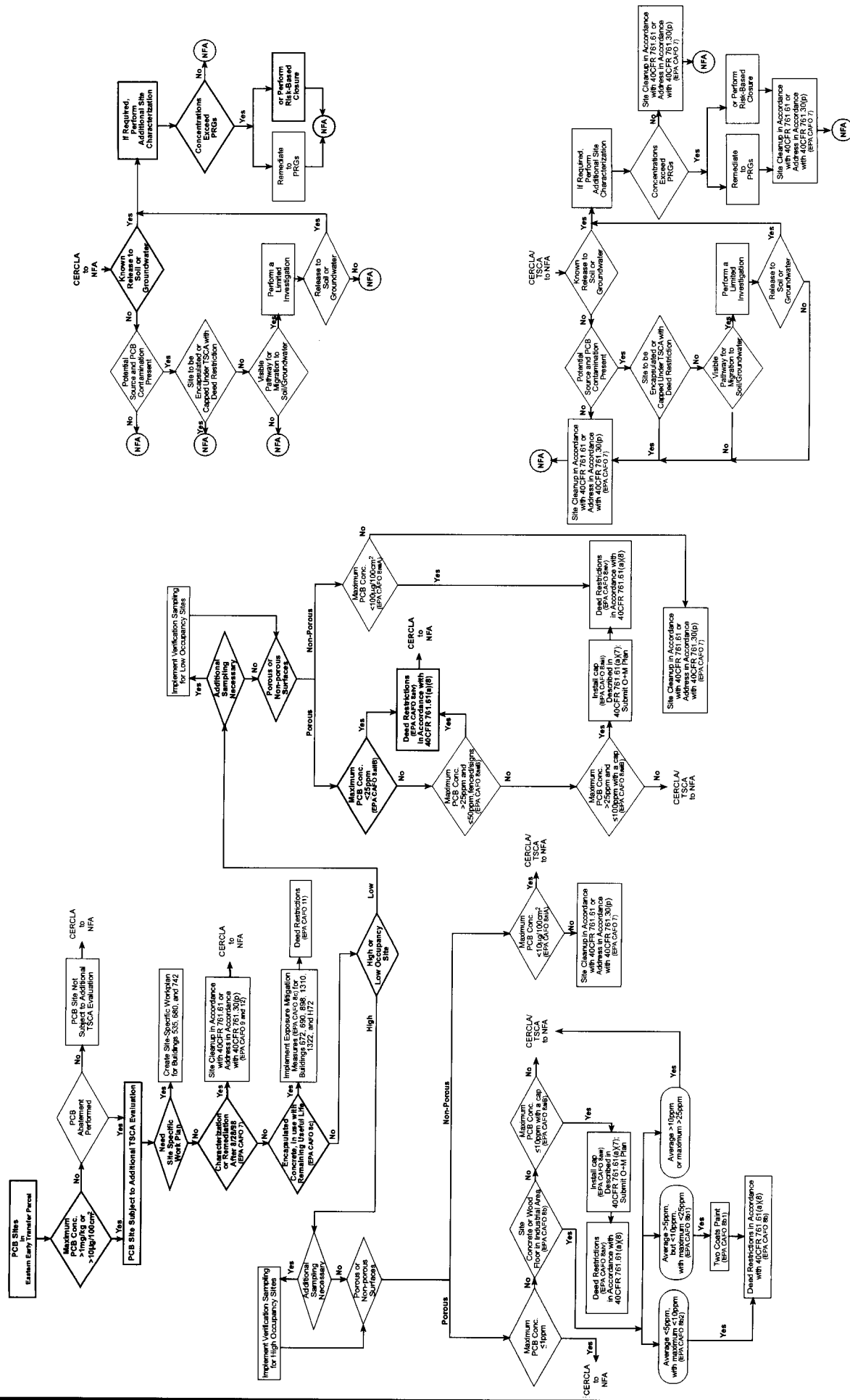


TABLE 1
Sample Results for Building 507 AL#01
PCB Sites, Lennar Mare Island, Vallejo, California

PCB Site Name	Site Description	Sample Number	Sample Matrix	Sample Date	Total PCB Concentration (mg/kg)	Comments
Building 507 AL#01	Abandoned Transformer Pad	6218-0118	Concrete	8/09/96	2.6	Location of former transformers
		6218-0119	Concrete	8/09/96	ND (< 5)	Location of former transformers
		PC0761	Concrete	7/08/97	0.3 J	Stain-specific location
		PC0762	Soil	7/08/97	0.4	Exposed soil adjacent to pad
		PC0763	Concrete	7/08/97	2 J	Stain-specific location
		PC0764	Soil	7/08/97	0.8 J	Exposed soil adjacent to pad
		B507AL01-CH0501-CO	Concrete	5/28/04	ND (< 0.0327)	Location of former transformers
		B507AL01-CH0502-CO	Concrete	5/28/04	0.369	Location of former transformers
		B507AL01-CH0503-CO	Concrete	5/28/04	ND (<0.0321)	Location of former transformers
		B507AL01-CH0504-SO	Sediment	5/28/04	1.29	Bottom of sump next to former pad

Notes:

Sample numbers beginning with PC were collected by TtEMI, sample numbers beginning with B were collected by CH2M HILL and all other samples were collected by SSPTS.

AL = Assessment Location

J = estimated concentration

mg/kg = milligrams per kilogram

ND = not detected (laboratory reporting limit in parenthesis)

PCB = polychlorinated biphenyl